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SOME EXAMPLES

OF THE RECENT USE OF

CONCRETE STONE

Economy Manufacturing Company
NEW HAVEN, CONN.
1907

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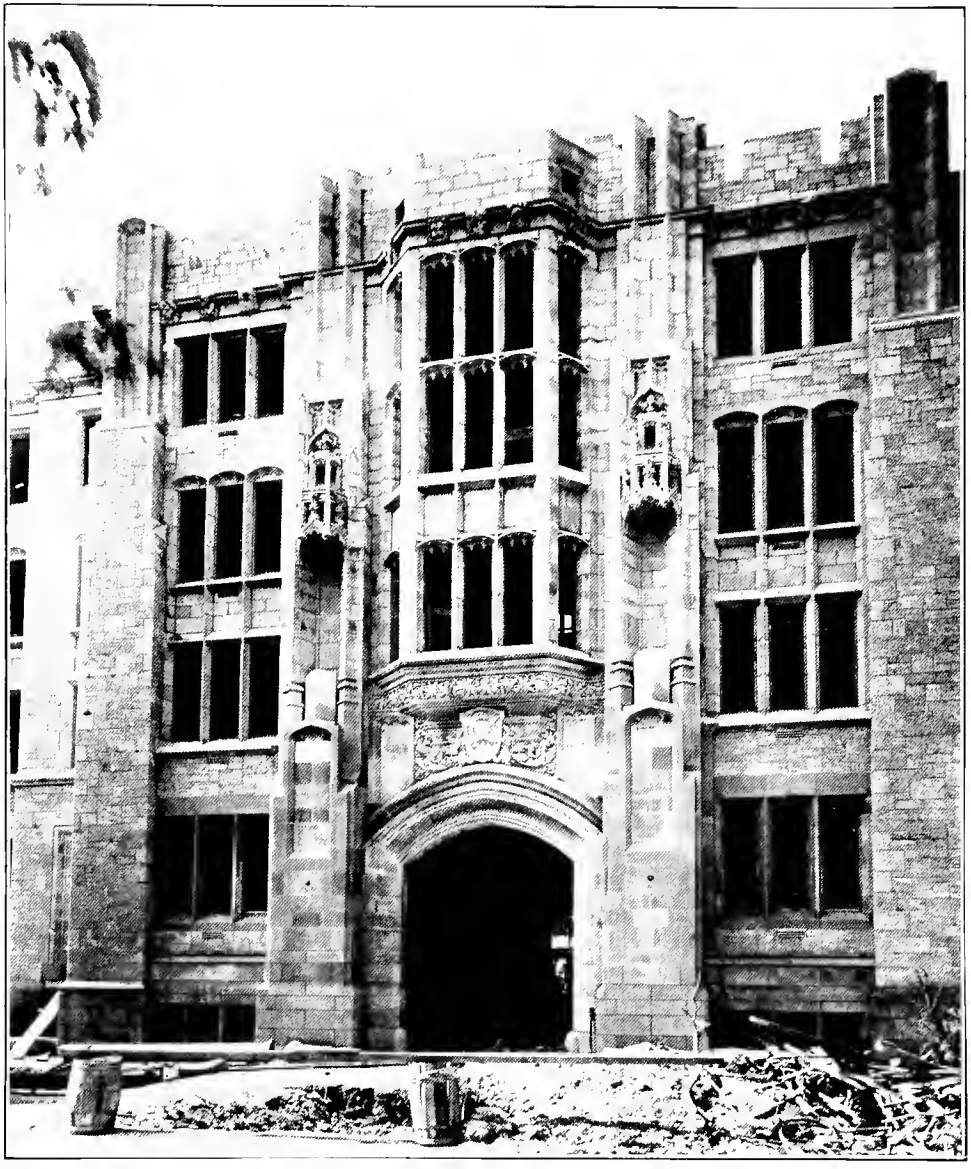
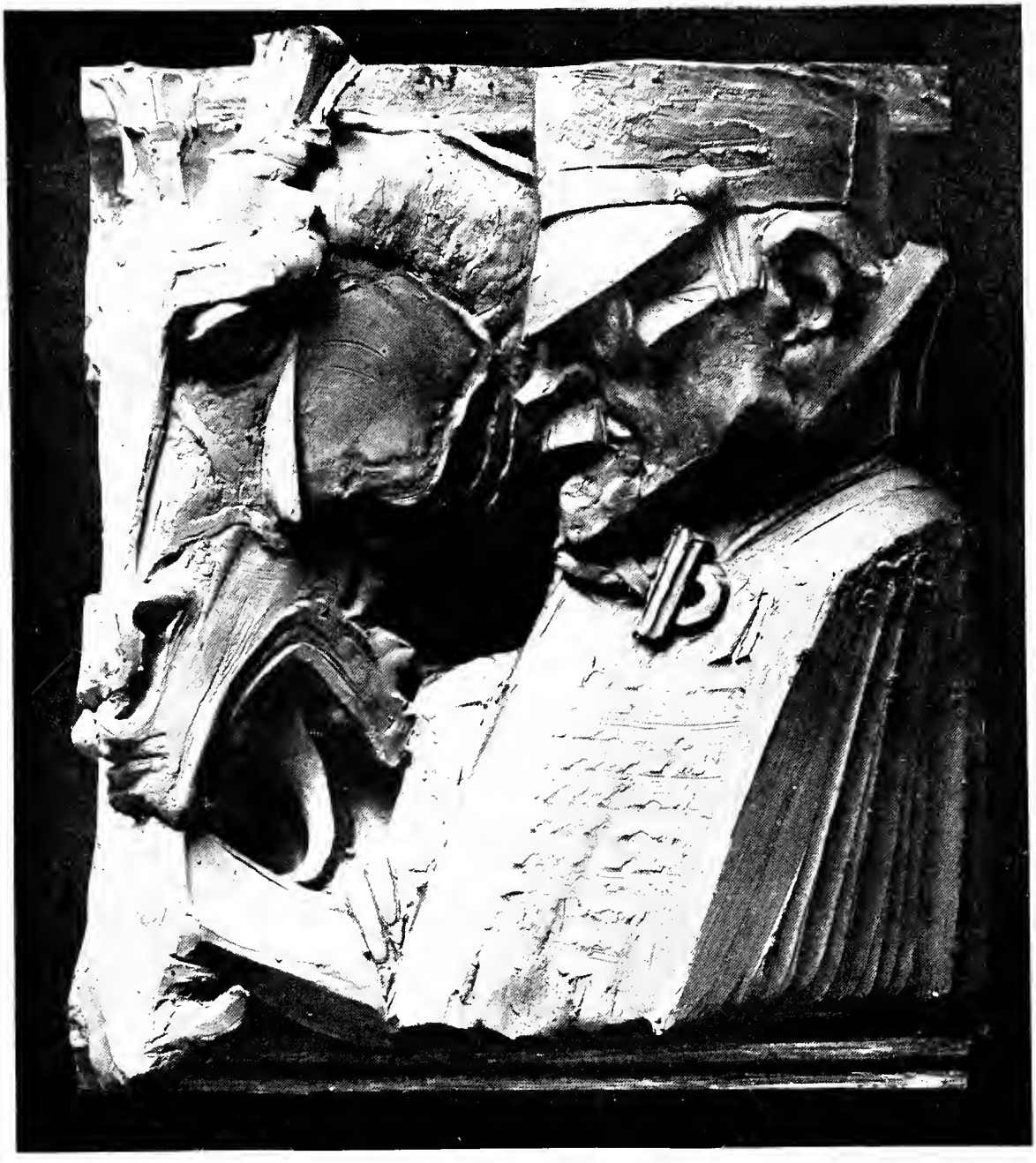


CRAM, GOODHUE & FERGUSON
ARCHITECTS

MAJ. J. M. CARSON, JR., Q.M., U. S. A.
IN CHARGE OF CONSTRUCTION

EAST SALLY PORT, CADET BARRACKS, WEST POINT, NEW YORK.

Arch and first story is of limestone, trim of second story and above is concrete stone, including entire bay and canopies. Details of bosses and canopies in following five pages. This building has a front of 320 feet, both the front and rear being elaborately trimmed with concrete stone, and the cornice contains one hundred and three foliated and grotesque bosses, these being modelled by Lee O. Lawrie, Sculptor.



GROTESQUE BOSS, CADET BARRACKS, WEST POINT, NEW YORK.

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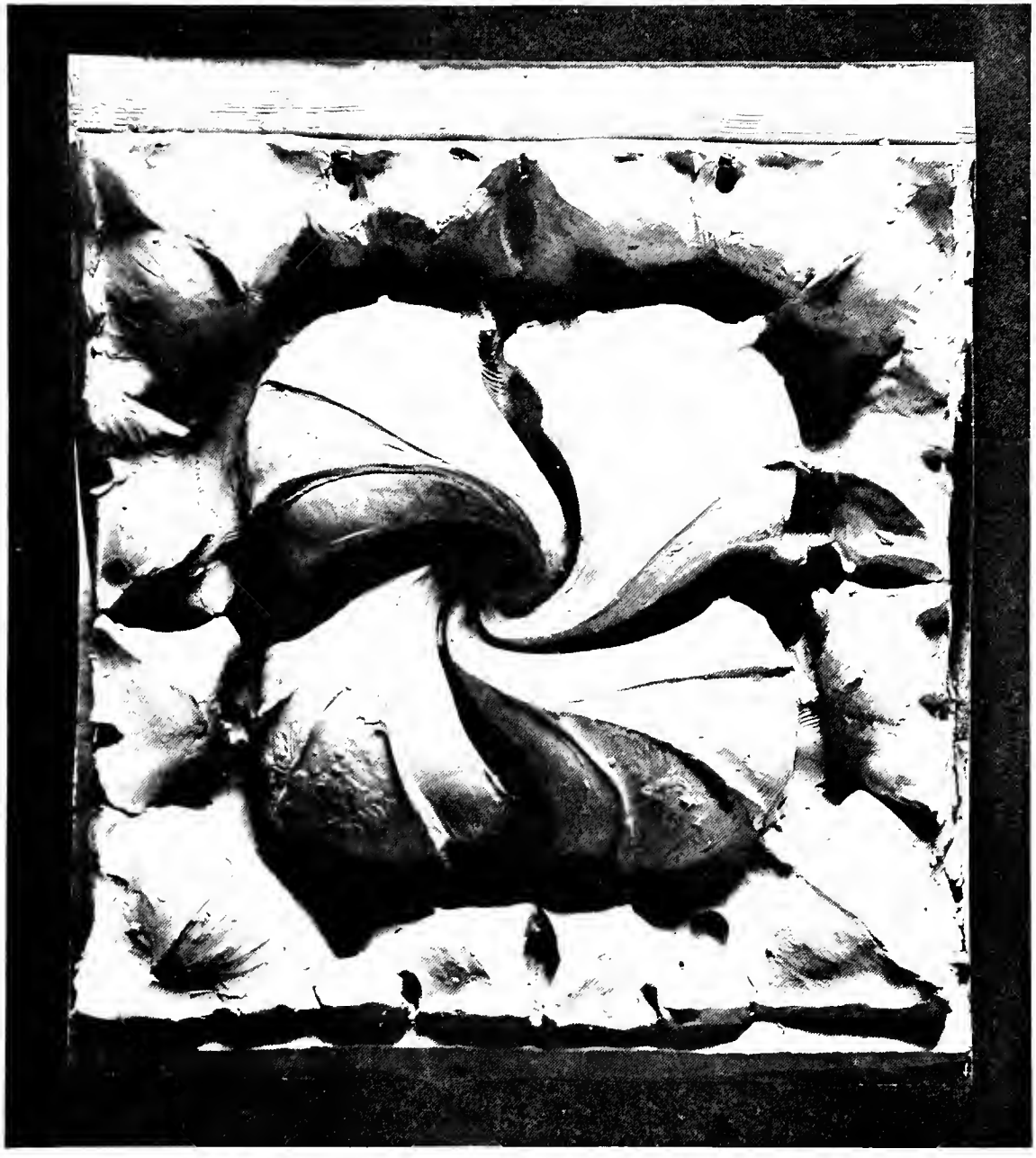
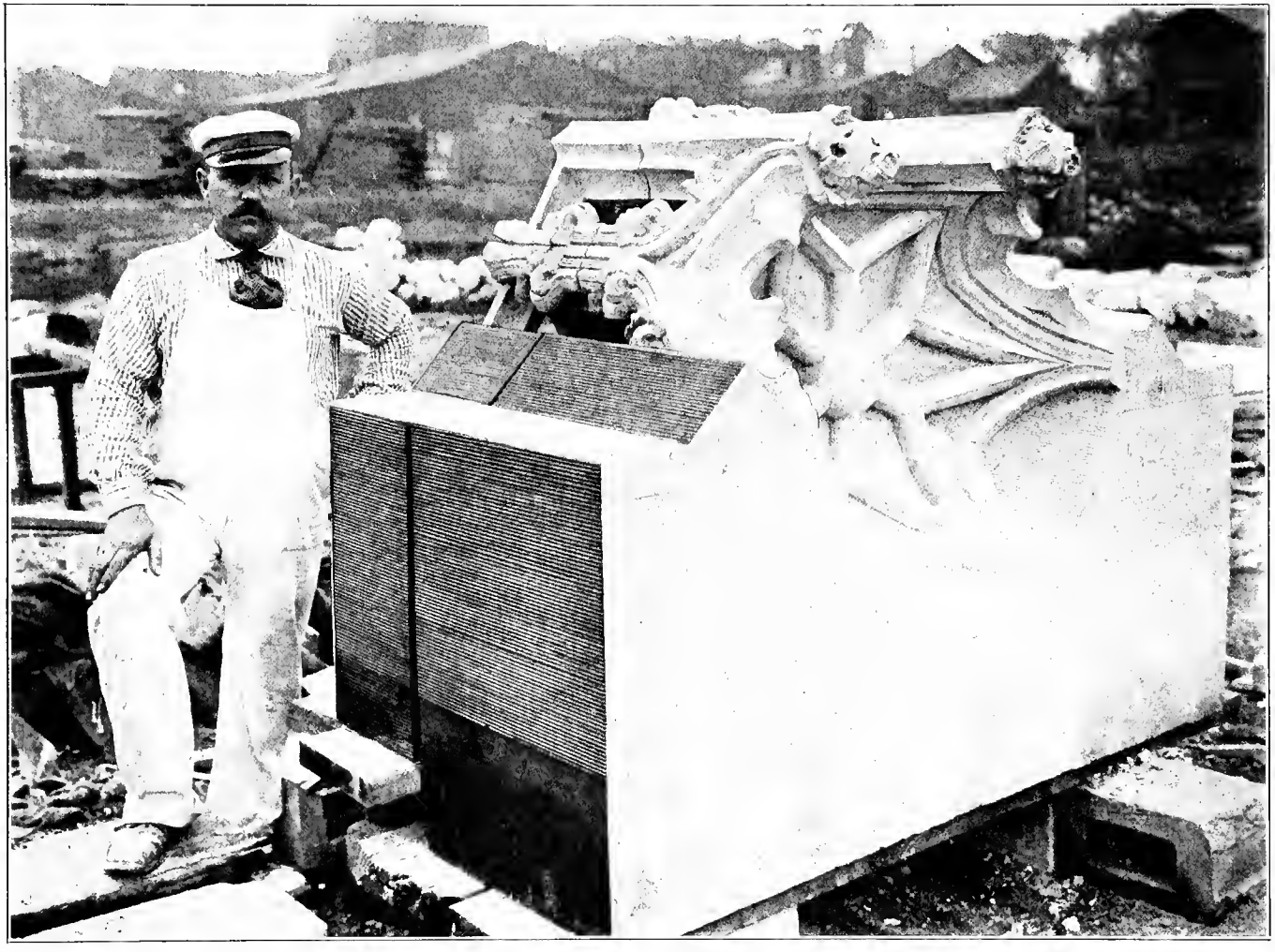
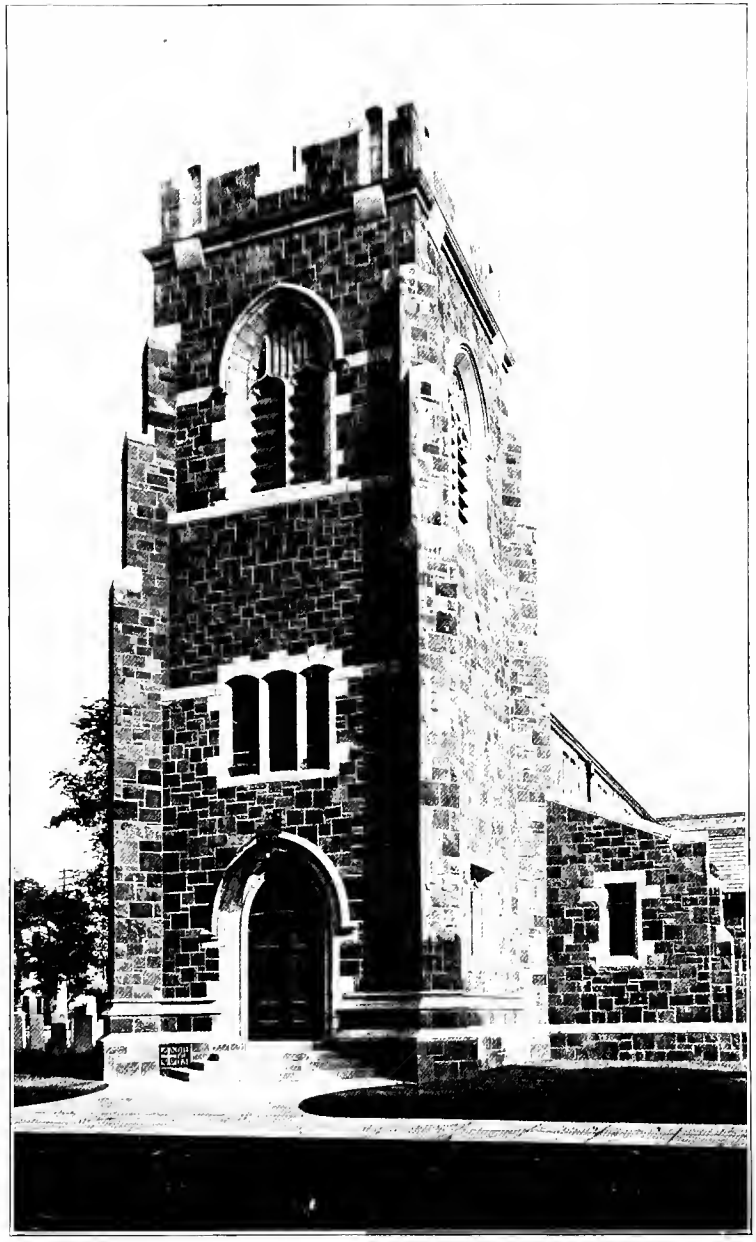


FOLIATED BOSS, CADET BARRACKS, WEST POINT, NEW YORK.



BOTTOM STONE IN CANOPIES OVER SALLY PORT, CADET BARRACKS, WEST POINT.

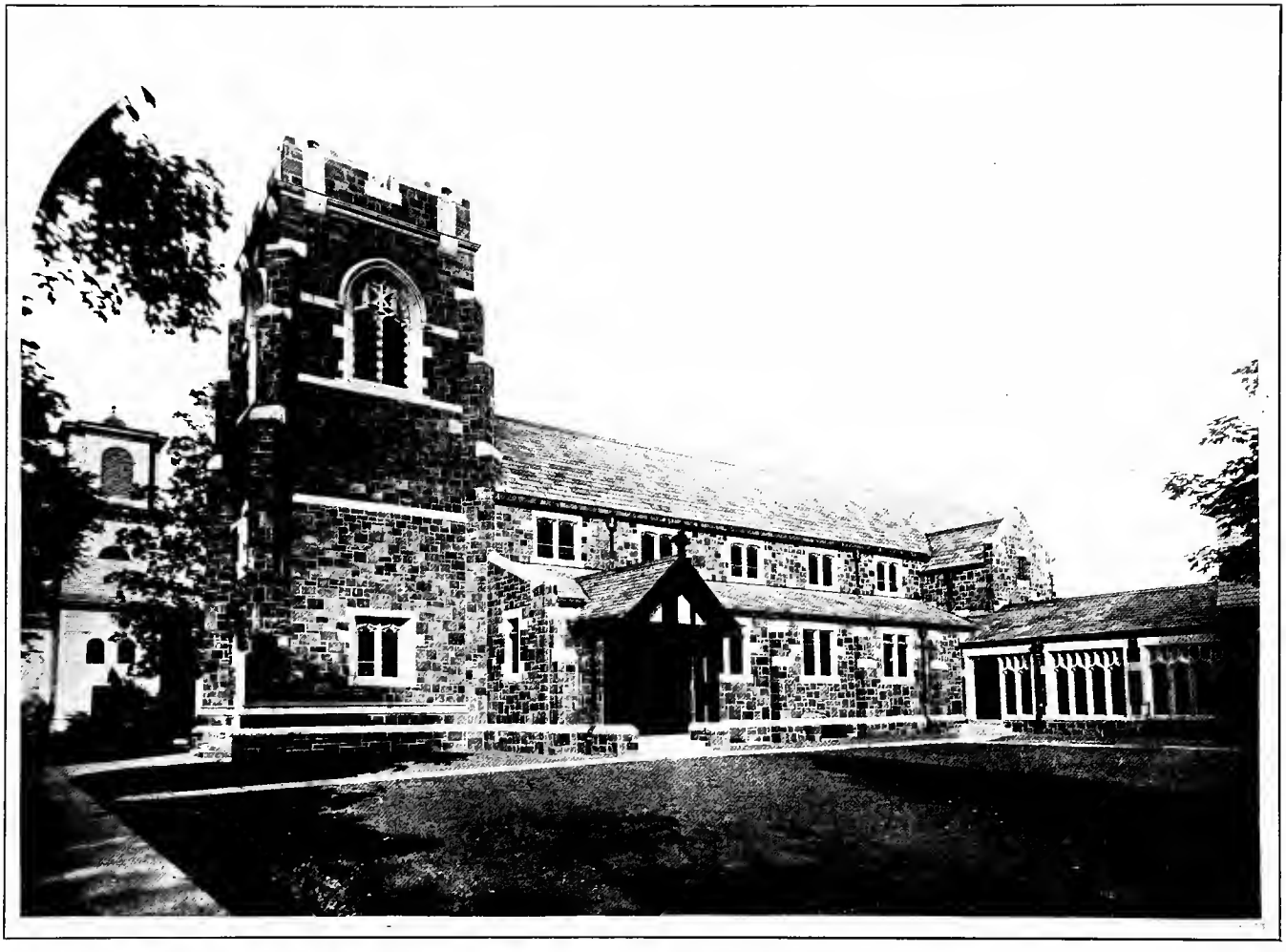
This building was originally drawn in terra cotta, and the attention of architects is called to the fact that this stone weighs over five thousand pounds, is cast in a solid piece, and in every respect is superior to terra cotta.



CRAM, GOODHUE & FERGUSON
ARCHITECTS

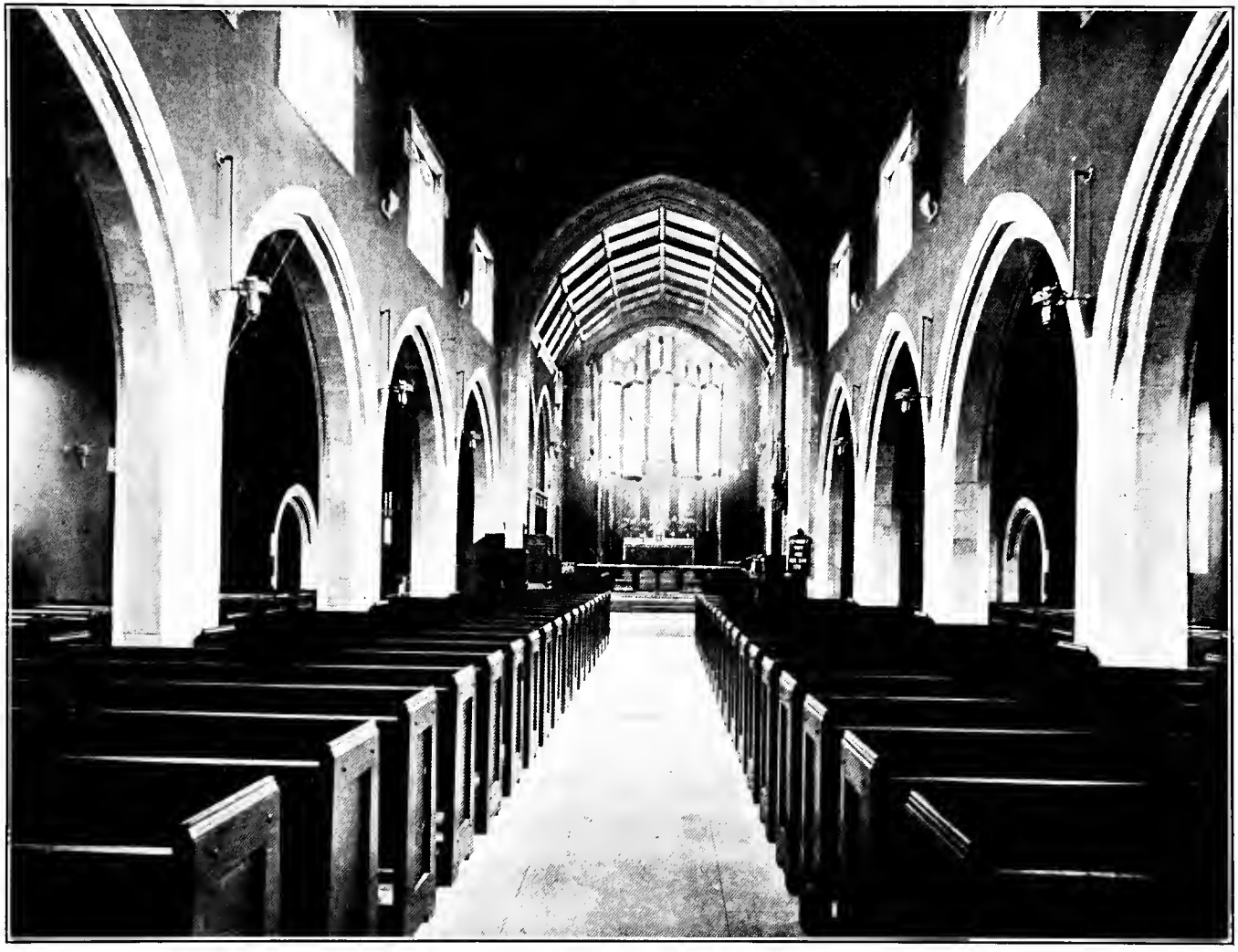
Tower, Christ Church, West Haven, Conn.

This church is built of local trap rock and trimmed with concrete stone. Some details appear on the three following pages.



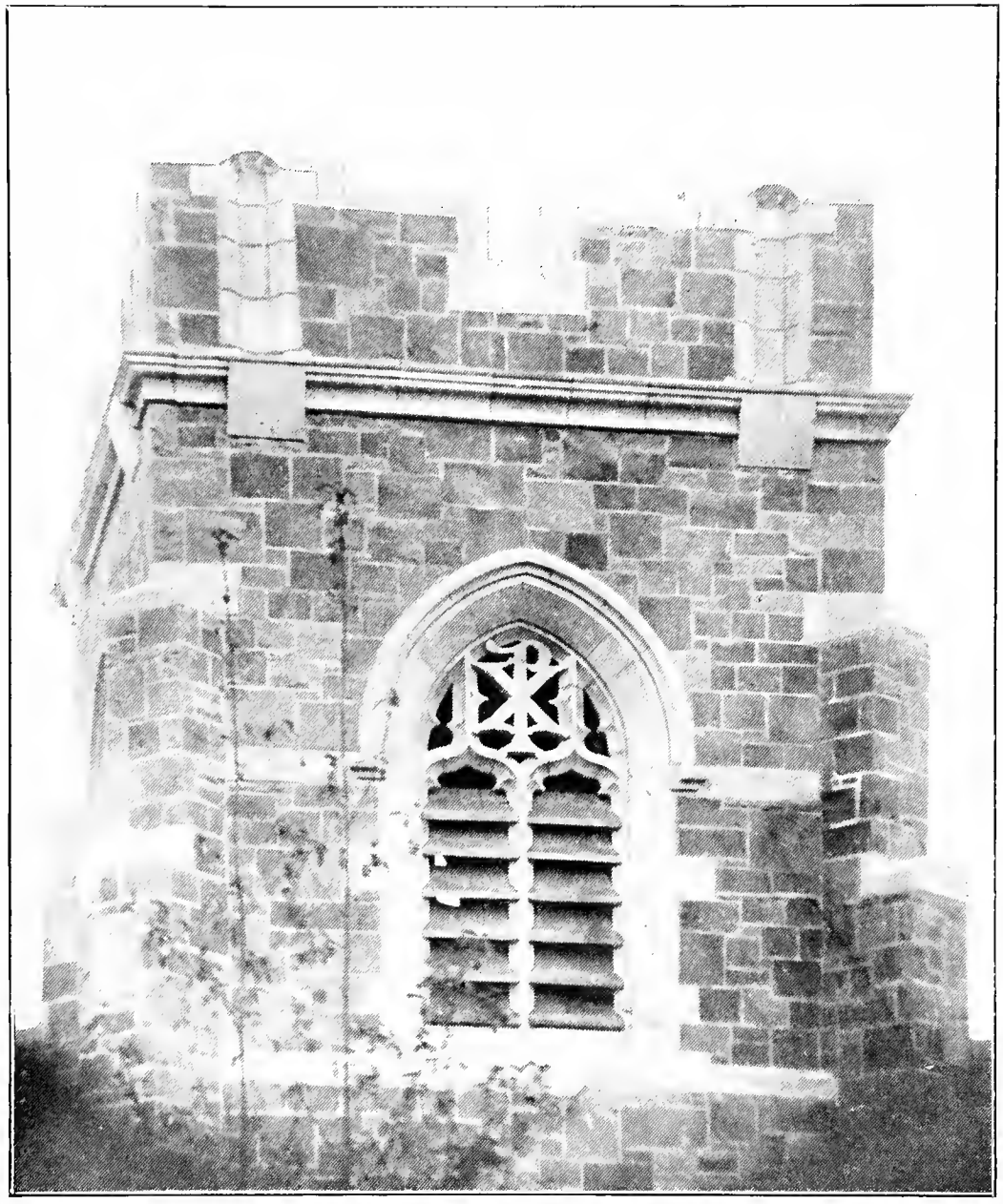
Christ Church, West Haven, Conn.

WESTERN ELEVATION.



Christ Church, West Haven, Conn.

VIEW IN THE NAVE LOOKING TOWARDS THE CHANCEL.



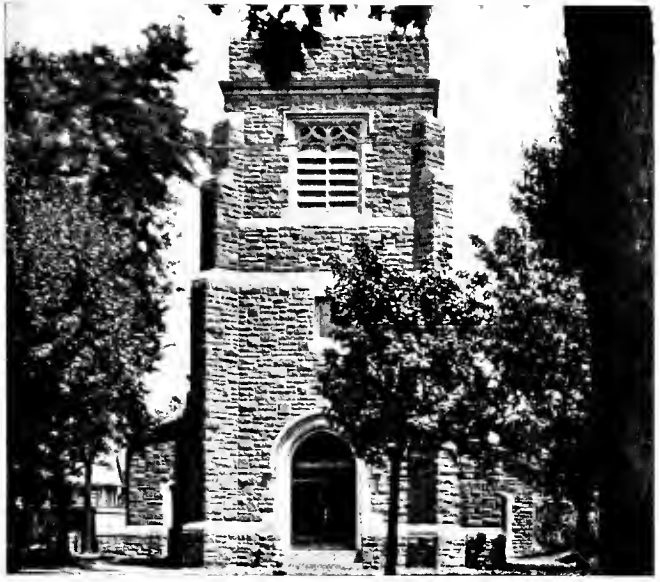
Christ Church, West Haven, Conn.

MONOGRAM IN TOWER.

CHARLES C. HAIGHT, Esq. }
L. W. ROBINSON, Esq. } ASSOCIATED ARCHITECTS

Trinity Church, New Haven, Conn.

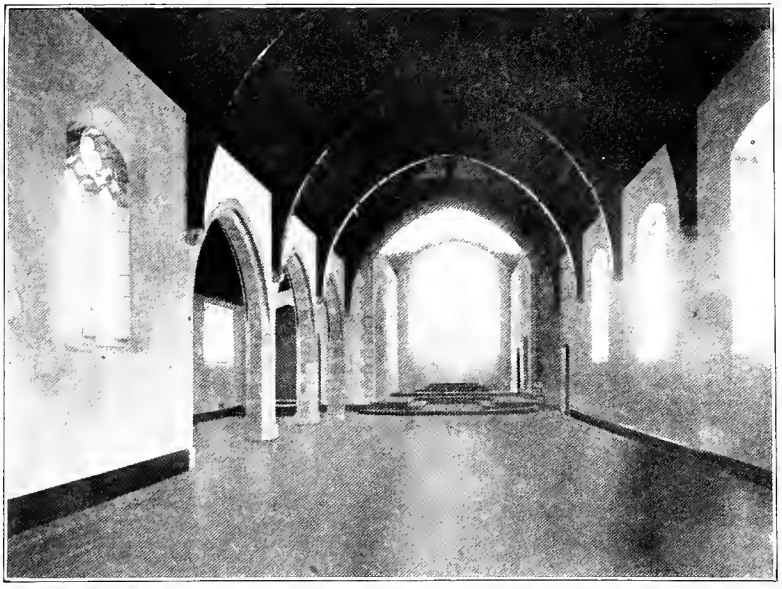
COLUMNS AND CAPITALS OF CONCRETE STONE.



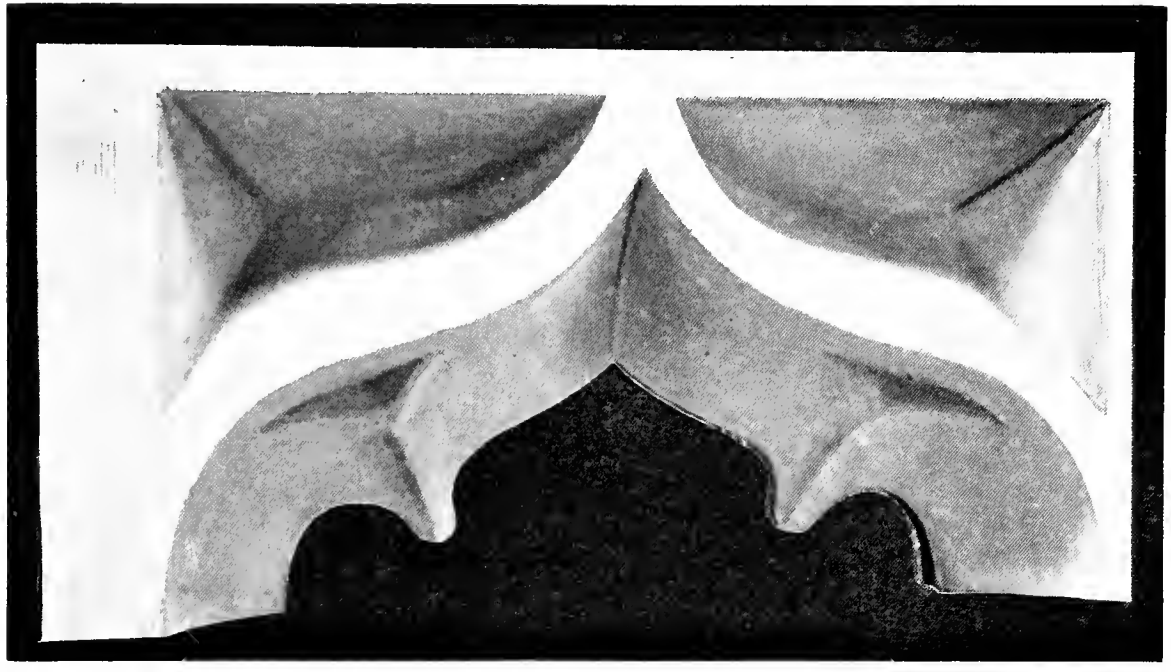
CRAM, GOODHUE & FERGUSON
ARCHITECTS

St. Philip's Church, Durham, N. C.

REV. S. S. BOST, RECTOR.

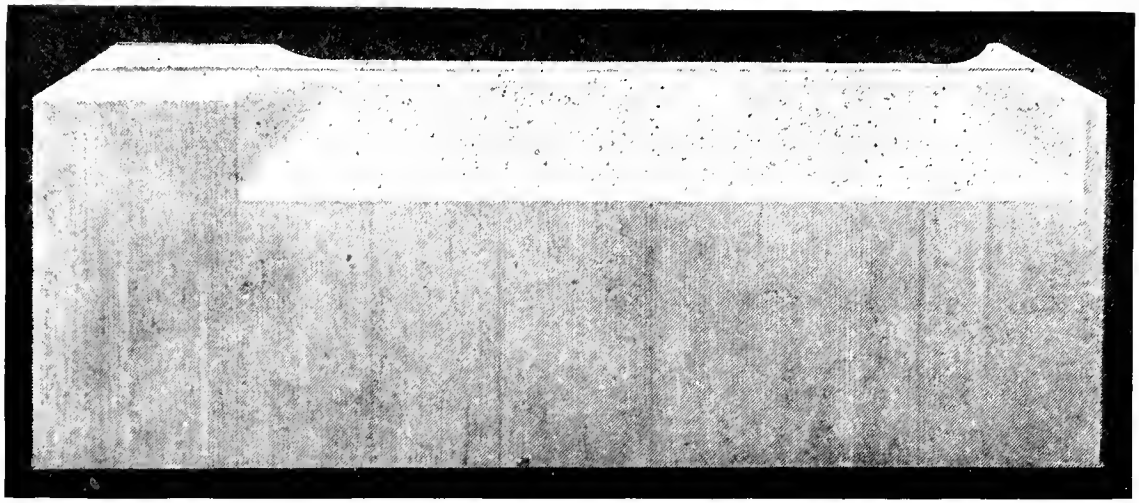


Built of local stone, trim and tracery of concrete stone. This church will seat about four hundred and fifty people, and has been built at a cost of $21,500.00.



It will be noticed that the above is a stone taken from the tower window in page 8. Our concrete stone having been suggested by the architects of the new cathedral at Halifax for trim and tracery in that structure, we were requested to send to the expert of the Bishop, a stone for test. The above stone, which goes through the wall and is similarly moulded on the inside, was selected as the most difficult one at the moment available for test, and its duplicate, taken from a load going to the West Haven Church, was sent in December, 1906, to Prof. Percy E. Nobbs, M.A., A.R.I.B.A., McGill University, Montreal, and by him put to what he described as a "crucial test," it having been four hours a day under exhaust steam, and frozen hard every night, this process having been continued for several weeks without disintegration. It was made like all of the concrete stone herein illustrated, out of crushed trap rock and cement, in a general proportion of two and one half parts of rock to one of cement. No sand or gravel being used, material thus made is far superior to limestone, because much more impermeable, in a general way taking up only one third the water of limestone, and the above test is one under which the soft limestones and sandstones would have undoubtedly failed.

Of course, in fire-resisting qualities, this stone is superior to any natural stone, not excepting granite.



CRAM, GOODHUE & FERGUSON
ARCHITECTS

Sill from St. James's Church, Woodstock, Vermont

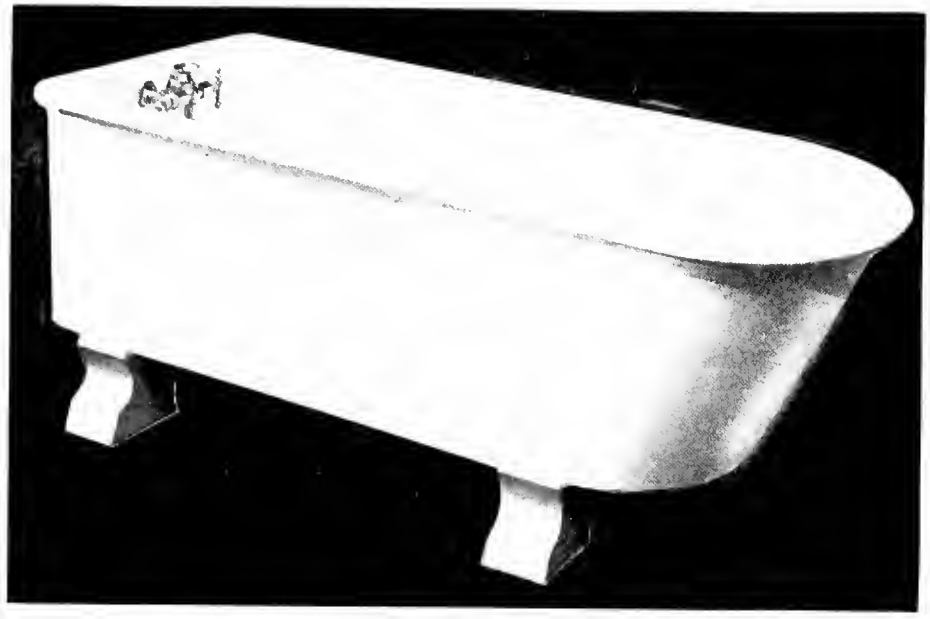
The stone for all the buildings herein illustrated has been cast in plaster, wooden or iron moulds, remaining in the forms not less than twenty-four hours, and from that to ten days, then taken out, rubbed down with La Farge cement, and afterwards sandpapered. In order, however, to get a more variable surface, the stone in this building has been cast in the same way, but after the stone is taken out of the forms, it has been treated by a process similar to a rubbing bed. This brings out the black aggregates in the trap rock, and gives a livelier surface, making it more desirable in some respects for trimming of stone buildings. The cut poorly illustrates the stone, but a greater percentage of large aggregates would produce a more marked mottle, and in larger stones doubtless be more desirable.

BROWN & VON BEREN
ARCHITECTS

RESIDENCE OF S. A. YORK, ESQ., 500 PROSPECT ST., NEW HAVEN, CONN.

This house, except the columns, is built entirely of concrete stone, even including the cellar partition walls. The blocks were cast in the usual way, and before they reached the final set they were trowelled down until water appeared, and an infusion of crushed marble sprinkled upon the surface. This increases the impermeability, and this building, erected in 1905, is, in the matter of discoloration, in marked and favorable contrast to limestone buildings put up at the same time. No efflorescence has ever appeared. In the background, distant about three miles, can be seen West Rock, which is an outcrop of volcanic lava (trap rock), several hundred feet deep. It is from this vein that we exclusively draw.

NOTE—In order to bring the lines out more clearly, the engraver has greatly exaggerated the joints in this building, and in the elevation on page 1.

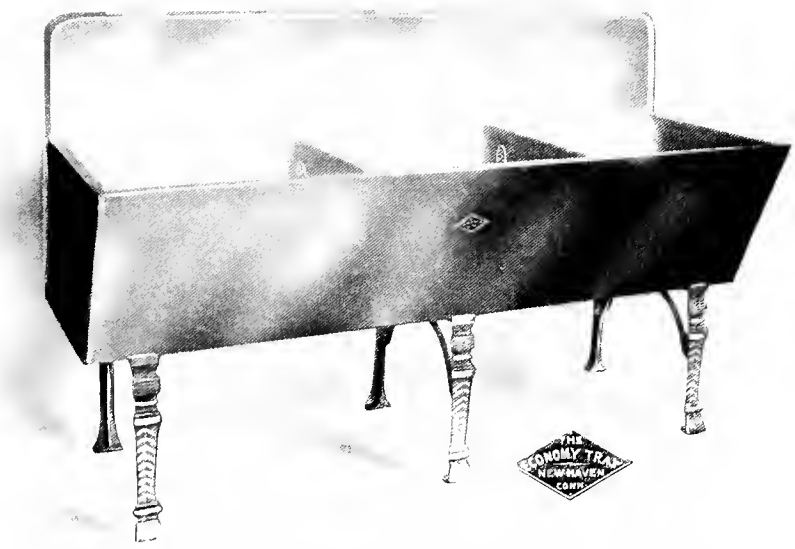


CONCRETE BATH TUB.

This is the result of considerably over one year's experiment, and now (November, 1907) about to be placed upon the market. It is made in two grades, the cheaper being of trap rock and cement, with the interior as smooth as a polished slab, and the color grey. It will be furnished somewhat cheaper than enamelled iron, and its advantage over that will be in its ability to stand severe abuse without injury, as it cannot be materially affected by accidental blows.

Another grade is made of pure white quartz, with white cement, and the interior polished. It is far superior to solid porcelain, because it cannot be injured, and has a smooth, but not glassy surface.

Length over all, five feet; width in clear, twenty-four inches; weight, three hundred and seventy-five pounds.



CONCRETE LAUNDRY TUBS

In about two and one half years we have sold nearly twenty thousand laundry tubs of a great variety of sizes. So far as we know, not a single one has clearly failed from fault of manufacture, though some have been broken in handling. Indeed, these fixtures are no more liable to crack after being shipped than a marble slab will crack, except through mal-treatment, and are far superior to soapstone or any other kind of stone bolted together; and the interior corners, being rounded, are from every point of view more sanitary. The surface is smooth and impermeable. While these are produced in a variety of sizes, with and without integral backs, and sinks to correspond, new patterns are now (November, 1907) in active process which will produce a somewhat more shapely fixture, with rounded corners and other advantages. The cost is about one third less than soapstone.

THE ECONOMY MANUFACTURING COMPANY

does not make up small pieces of stone to send to architects as specimens, but will be glad to send when desired, a small section of some stone in process of production for some building, usually a section of a window jamb, to any architect who cares to receive it.

They also make concrete stone of quartz containing yellow and black aggregates. The quartz being next to the diamond in hardness, very good results have been obtained with the material, a slight glitter giving an animated surface; the cost is about twenty-five cents per cubic foot above trap rock. Pure white quartz and pure white cement is also used and is available for special work, such as church altars, and is a little more expensive than ordinary concrete, but very much less than marble, with which it competes.

It should be remembered that the deposit of trap rock in Connecticut is said by eminent geologists to be the largest in the world, and that the quartz, as well as the pure white cement, is also produced in this state.